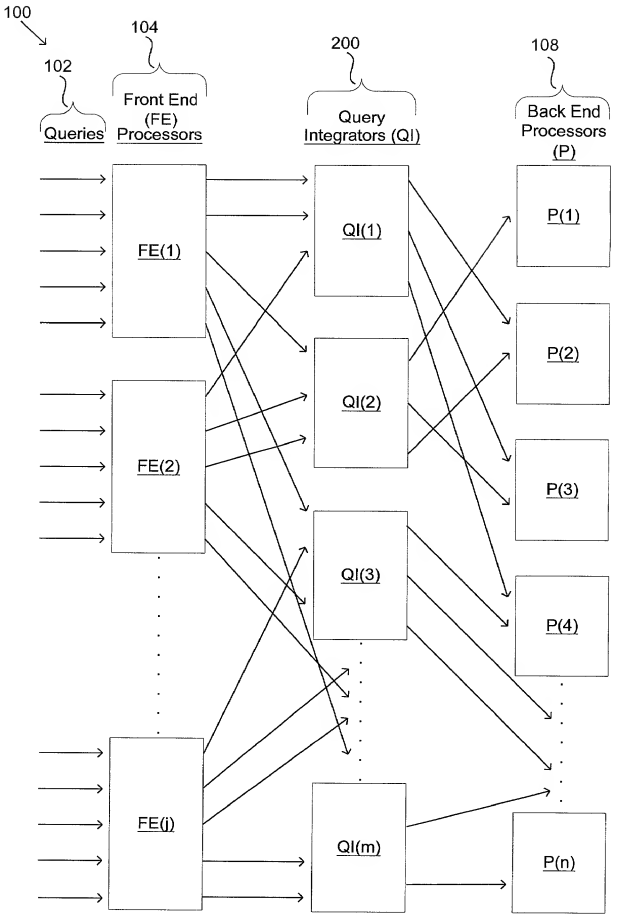
100
102
Queries
104
Front End (FE) Processors
200
Query Integrators (QI)
108
Back End Processors (P)
FE(1)
FE(2)
FE(j)
QI(1)
QI(2)
QI(3)
QI(m)
P(1)
P(2)
P(3)
P(4)
P(n)

FIG. 1

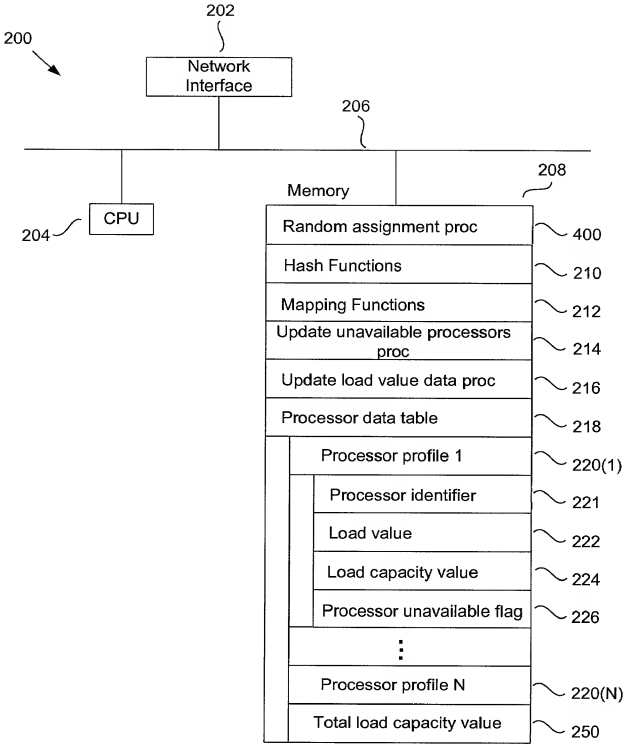
200
202
Network Interface
206
208
Memory
CPU
204
Random assignment proc
400
Hash Functions
210
Mapping Functions
212
Update unavailable processors proc
214
Update load value data proc
216
Processor data table
218
Processor profile 1
220(1)
Processor identifier
221
Load value
222
Load capacity value
224
Processor unavailable flag
226
Processor profile N
220(N)
Total load capacity value
250

FIG. 2

Processor identifier	Load value	Load capacity value	Unavailable data
1	3	250	
2	2	800	
3	4	350	
4	1	400	
5	6	100	
6	9	300	
⋮			
N			

Total load capacity value: 12, 500

Fig. 3A

Processor identifier	Load value	Load capacity value	Unavailable data
1	3	250	
2	2	800	
3	4	350	
4	1	400	√
5	6	100	√
6	9	300	
⋮			
N			

Total load capacity value: 12, 000

FIG. 3B

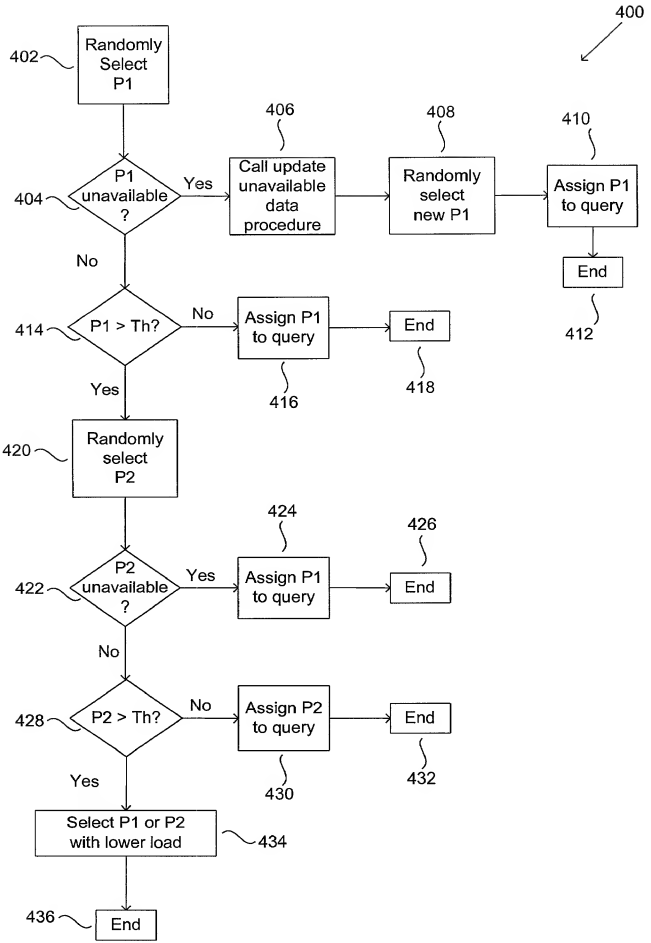
400
402
Randomly Select P1
404
P1 unavailable ?
Yes
406
Call update unavailable data procedure
408
Randomly select new P1
410
Assign P1 to query
End
412
No
414
P1 > Th?
No
Assign P1 to query
416
End
418
Yes
420
Randomly select P2
422
P2 unavailable ?
Yes
424
Assign P1 to query
426
End
No
428
P2 > Th?
No
Assign P2 to query
430
End
432
Yes
Select P1 or P2 with lower load
434
436
End

FIG. 4

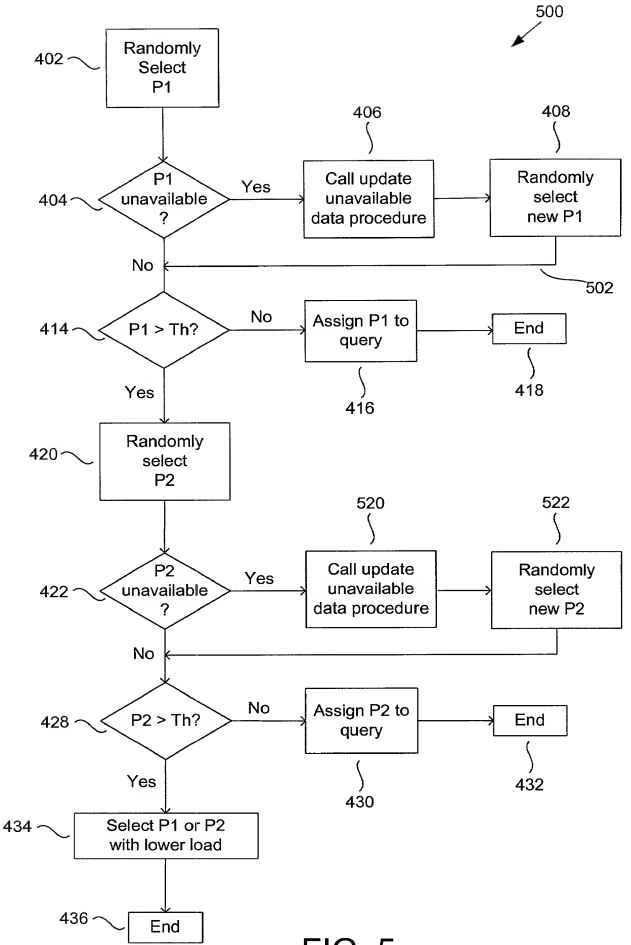
500
402
Randomly Select P1
406
408
404
P1 unavailable ?
Yes
Call update unavailable data procedure
Randomly select new P1
No
502
414
P1 > Th?
No
Assign P1 to query
End
Yes
416
418
420
Randomly select P2
520
522
422
P2 unavailable ?
Yes
Call update unavailable data procedure
Randomly select new P2
No
428
P2 > Th?
No
Assign P2 to query
End
Yes
430
432
434
Select P1 or P2 with lower load
436
End

FIG. 5